



# 2015 ESS SYMPOSIUM

University of Florida • Tradewinds Island Resort  
St. Pete Beach, Florida • May 26-29, 2015

## PROGRAM PREVIEW

**Tuesday, May 26**

### Opening Reception

5:00 – 7:00 PM

Location: **Breck Deck North** (outdoors)

### Squire's Lecture – Reproductive Physiology

Moderator: **TBD**

Location: **Island Ballroom (Tarpon/Sawyer/Long Key)**

7:00 PM

Welcome

7:15 PM

**Prolactin in the horse: Historical perspective, actions and reactions, and its role in reproduction.**

Donald L. Thompson, Jr., *Louisiana State University Agricultural Center, Baton Rouge, LA, USA.*

**Wednesday, May 27**

### “Society Stakes” 25-Furlong Fun Run/Walk

6:00 – 7:00 AM

Location: Meet at **Cabana Hut** on the beach

## ORAL PRESENTATIONS & SYMPOSIA

### Invited Speaker – Exercise Physiology

Moderator: **TBD**

Location: **Island Ballroom (Tarpon/Sawyer/Long Key)**

8:00 AM

**Has the golden age of equine exercise physiology passed and if so, have we answered all the big questions?**

David Marlin, *David Marlin Consulting Ltd., Bury St Edmunds, Suffolk, United Kingdom.*

### Exercise Physiology: Graduate Student Competition

Moderator: **TBD**

Location: **Glades (Jacaranda Hall)**

#### ABSTRACT #

9:15 AM

21

**Rider energy expenditure during high-intensity horseback activity.**

C. L. O'Reilly\*, D. H. Sigler, J. D. Fluckey, M. M. Vogelsang, J. E. Sawyer, *Texas A&M University, College Station, TX, USA.*

9:30 AM

22

**The effects of conjugated linoleic acid supplementation on lipopolysaccharide-stimulated fibroblastic synoviocytes: A preliminary study.**

A. A. Millican\*<sup>1</sup>, K. L. Vernon<sup>1</sup>, H. Walker-Dunn<sup>1</sup>, J. A. Coverdale<sup>2</sup>, W. C. Bridges<sup>1</sup>, <sup>1</sup>*Clemson University, Clemson, SC, USA,* <sup>2</sup>*Texas A&M University, College Station, TX, USA.*

9:45 AM

23

**Influence of whole-body vibration on bone density in the stalled horse.**

E. S. Hulak\*, H. S. Spooner, J. C. Haffner, *Middle Tennessee State University, Murfreesboro, TN, USA.*

- 10:00 AM 24 **The effect of chiropractic treatment on performance and behavior of lesson horses.**  
J. A. Schultz\*<sup>1</sup>, J. C. Haffner<sup>1</sup>, M. S. Wooten<sup>2</sup>, R. M. Hoffman<sup>1</sup>, H. S. Spooner<sup>1</sup>, <sup>1</sup>Middle Tennessee State University, Murfreesboro, TN, USA, <sup>2</sup>Equine Performax Veterinary, Thompson's Station, TN, USA.
- 10:15 AM 25 **The thermal effects of protective sports boots on the forelimb of Thoroughbred and Argentinian polo ponies.**  
B. C. Snively\*, J. E. Bowser, B. Nabors, R. L. Linford, *Mississippi State University, Starkville, MS, USA.*
- 10:30 AM **Refreshment Break** (Banyan Breezeway)

## Nutrition: Graduate Student Competition (1)

Moderators: TBD

Location: **Tarpon Key (Island Ballroom)**

### ABSTRACT #

- 9:15 AM 38 **Exogenous lactobacilli mitigate microbial changes associated with grain fermentation *in vitro*.**  
B. E. Harlow\*<sup>1</sup>, L. M. Lawrence<sup>1</sup>, I. A. Kagan<sup>1,2</sup>, P. A. Harris<sup>3</sup>, M. D. Flythe<sup>1,2</sup>, <sup>1</sup>University of Kentucky, Lexington, KY, USA, <sup>2</sup>USDA, Agricultural Research Service, Forage-Animal Production Research Unit, Lexington, KY, USA, <sup>3</sup>Waltham Centre for Pet Nutrition, Melton Mowbray, Leicestershire, UK.
- 9:30 AM 39 **Foregut survivability of *Megasphaera elsdenii* in equine.**  
T. K. Dove\*, C. A. Aperce, W. L. Beard, J. M. Kouba, C. I. Vahl, J. S. Drouillard, T. L. Douthit, *Kansas State University, Manhattan, KS, USA.*
- 9:45 AM 40 **Colonic bacterial composition and blood cells in horses undergoing a change of diet.**  
P. Grimm\*, C. Philippeau, V. Julliand, *Agrosup Dijon, Dijon, Bourgogne, France.*
- 10:00 AM 41 **Magnesium aspartate supplementation and reaction speed response in horses.**  
J. A. Dodd\*<sup>1</sup>, G. Doran<sup>1</sup>, P. Harris<sup>2</sup>, G. K. Noble<sup>1</sup>, <sup>1</sup>Charles Sturt University, Wagga Wagga, NSW, Australia, <sup>2</sup>Waltham Centre for Pet Nutrition, Leicestershire, United Kingdom.
- 10:15 AM 42 **Comparison of inflammation, nutritional status, muscle mass, pituitary function, and age in geriatric horses.**  
M. H. Siard\*<sup>1</sup>, A. Betancourt<sup>1</sup>, P. A. Harris<sup>2</sup>, A. D. Moffett<sup>3</sup>, K. E. McMurry<sup>1</sup>, S. E. Reedy<sup>1</sup>, A. A. Adams<sup>1</sup>, <sup>1</sup>University of Kentucky, Lexington, KY, USA, <sup>2</sup>WALTHAM Centre for Pet Nutrition, Waltham on the Wolds, Leicestershire, United Kingdom, <sup>3</sup>MARS Horsecare US, Inc, Dalton, OH, USA.
- 10:30 AM **Refreshment Break** (Banyan Breezeway)

## Production & Management: Graduate Student Competition (1)

Moderators: TBD

Location: **Sabal (Jacaranda Hall)**

### ABSTRACT #

- 9:15 AM 80 **Dopaminergic (cabergoline) and antidopaminergic (sulpiride) effects on indices of insulin sensitivity in horses.**  
N. A. Valencia\*, D. L. Thompson, E. L. Oberhaus, *Louisiana State University Agricultural Center, Baton Rouge, LA, USA.*
- 9:30 AM 81 **The effects of a prostaglandin transport inhibitor (DIDS) on delaying diestrus in non-pregnant mares.**  
K. M. Klohonatz\*, L. C. Nulton, G. J. Bouma, J. E. Bruemmer, *Colorado State University, Fort Collins, CO, USA.*
- 9:45 AM 82 **Effects of prolonged dexamethasone treatment on signaling pathways associated with muscle protein degradation in mature horses.**  
C. M. M. Loos\*<sup>1</sup>, T. Barnes<sup>1</sup>, K. M. Brennan<sup>2</sup>, K. L. Urschel<sup>1</sup>, <sup>1</sup>University of Kentucky, Lexington, KY, USA, <sup>2</sup>Alltech Inc, Nicholasville, KY, USA.
- 10:00 AM 83 **Maternal fatty acid supplementation influences memory and learning ability in yearling and 2-year-old horses.**  
A. M. Adkin\*, A. V. Muniz, C. J. Mortensen, L. K. Warren, *University of Florida, Gainesville, FL, USA.*
- 10:15 AM 84 **Yield, forage nutritive value, and preference of annual grasses under horse grazing.**  
A. M. Grev\*, C. C. Sheaffer, D. N. Catalano, M. L. Schultz, K. L. Martinson, *University of Minnesota, St. Paul, MN, USA.*
- 10:30 AM **Refreshment Break** (Banyan Breezeway)

## Undergraduate Student Competition (1)

Moderators: TBD

Location: Jasmine (Jacaranda Hall)

	<u>ABSTRACT #</u>	
9:15 AM	1	<b>The “pasture heaves” restricted lung transcriptome: A tool to decipher the pathophysiology of airway hyper-responsive diseases in the horse.</b> S. Mack <sup>*1</sup> , L. A. Bright <sup>1</sup> , C. L. Hunter <sup>1</sup> , M. A. Arrick <sup>1</sup> , S. Kumar <sup>1</sup> , A. Perkins <sup>1</sup> , A. Eddy <sup>1</sup> , A. Claude <sup>1</sup> , N. Mujahid <sup>1</sup> , M. Brashier <sup>1</sup> , B. Nanduri <sup>1</sup> , S. C. Burgess <sup>2</sup> , C. E. Swiderski <sup>1</sup> , <sup>1</sup> Mississippi State University, Mississippi State, MS, USA, <sup>2</sup> University of Arizona, Tucson, AZ, USA.
9:30 AM	2	<b>“A sorrel is hot...” A genetic investigation of the horseman’s myth.</b> L. N. Jacobs <sup>*1</sup> , E. A. Staiger <sup>1</sup> , J. D. Albright <sup>2</sup> , S. A. Brooks <sup>3</sup> , <sup>1</sup> Cornell University, Ithaca, NY, USA, <sup>2</sup> University of Tennessee, Knoxville, TN, USA, <sup>3</sup> University of Florida, Gainesville, FL, USA.
9:45 AM	3	<b>Genetic investigation of limbal squamous cell carcinoma in Haflinger horses.</b> J. Liu <sup>*1</sup> , M. Lassaline <sup>1</sup> , S. Romero de Mello Sa <sup>2</sup> , M. Huynh <sup>2</sup> , R. Seferian <sup>2</sup> , R. Bellone <sup>1</sup> , <sup>1</sup> University of California-Davis, Davis, CA, USA, <sup>2</sup> University of Tampa, Tampa, FL, USA.
10:00 AM	4	<b>Fecal fatty acids in yearlings fed diets differing in carbohydrate fractions.</b> D. Oliver <sup>*</sup> , K. Norris, M. Baldin, K. Harvatine, W. B. Staniar, <i>The Pennsylvania State University, University Park, PA, USA.</i>
10:15 AM	5	<b>Seasonal effects on pasture and a group of mares with metabolic syndrome.</b> S. Lapinskas <sup>*1</sup> , J. Rayner <sup>3</sup> , R. Jacobs <sup>2</sup> , C. Woolley <sup>4</sup> , R. Splan <sup>2</sup> , T. M. Hess <sup>1</sup> , <sup>1</sup> Colorado State University, Fort Collins, CO, USA, <sup>2</sup> Virginia Tech Middleburg Agricultural Research and Extension Center, Virginia Tech, Middleburg, VA, USA, <sup>3</sup> University of Edinburgh, Edinburgh, Scotland, <sup>4</sup> Harper Adams University, Nantwich, England.
10:30 AM		<b>Refreshment Break</b> (Banyan Breezeway)

## Genetics: Graduate Student Competition

Moderator: TBD

Location: Glades (Jacaranda Hall)

	<u>ABSTRACT #</u>	
11:00 AM	34	<b>Differential circulating microRNA profile in insulin-sensitive vs. insulin-resistant mares.</b> H. F. da Costa Santos <sup>*1</sup> , T. Mask <sup>1</sup> , R. K. Splan <sup>2</sup> , T. M. Hess <sup>1</sup> , J. E. Bruemmer <sup>1</sup> , <sup>1</sup> Colorado State University, Fort Collins, CO, USA, <sup>2</sup> Virginia Tech Middleburg Agricultural Research and Extension Center, Virginia Tech, Middleburg, VA, USA.
11:15 AM	35	<b>Preliminary investigation of phenotyping methods for response to a sudden novel stimulus in the horse.</b> A. J. Dinerman <sup>*</sup> , C. L. Wickens, J. Callahan, S. A. Brooks, <i>University of Florida, Gainesville, FL, USA.</i>
11:30 AM	36	<b>The <i>DMRT3</i> “Gait keeper” mutation affects harness racing performance and riding traits in Finnhorses.</b> K. Jäderkvist <sup>*1</sup> , L. Johansson <sup>1</sup> , A. Mykkänen <sup>2</sup> , M. Mäenpää <sup>3</sup> , L. S. Andersson <sup>1</sup> , L. Andersson <sup>4</sup> , T. Árnason <sup>5</sup> , G. Lindgren <sup>1</sup> , <sup>1</sup> Swedish University of Agricultural Sciences, Uppsala, Sweden, <sup>2</sup> University of Helsinki, Helsinki, Finland, <sup>3</sup> Suomen Hippos ry, Espoo, Finland, <sup>4</sup> Uppsala University, Uppsala, Sweden, <sup>5</sup> IHBC AB, Knubbo, Morgongåva, Sweden.

## Nutrition: Graduate Student Competition (2)

Moderators: TBD

Location: Tarpon Key (Island Ballroom)

	<u>ABSTRACT #</u>	
11:00 AM	43	<b>Influence of oat <math>\beta</math>-glucan on neutrophil function and lymphocyte subsets in response to stress.</b> J. M. Bobel <sup>*</sup> , M. R. Di-Lernia, J. R. Abbott, M. T. Long, L. K. Warren, <i>University of Florida, Gainesville, FL, USA.</i>
11:15 AM	44	<b>Evaluation of conjugated linoleic acid supplementation on markers of joint inflammation and cartilage metabolism in young horses challenged with lipopolysaccharide (LPS).</b> A. N. Bradbery <sup>*1</sup> , J. A. Coverdale <sup>1</sup> , K. L. Vernon <sup>2</sup> , J. L. Leatherwood <sup>3</sup> , C. E. Arnold <sup>1</sup> , R. A. Dabareiner <sup>1</sup> , M. K. Kahn <sup>1</sup> , A. A. Millican <sup>2</sup> , T. H. Welsh <sup>1</sup> , S. B. Smith <sup>1</sup> , <sup>1</sup> Texas A&M University, College Station, TX, USA, <sup>2</sup> Clemson University, Clemson, SC, USA, <sup>3</sup> Sam Houston State University, Huntsville, TX, USA.
11:30 AM	45	<b>Using the indicator amino acid oxidation technique to study threonine requirements in horses.</b> C. H. Mok <sup>*</sup> , T. Brewster-Barnes, K. L. Urschel, <i>University of Kentucky, Lexington, KY, USA.</i>

- 11:45 AM 46 **Postprandial changes in plasma urea nitrogen concentrations in response to amino acid supplementation in horses.**  
C. M. Latham\*<sup>1</sup>, T. Brewster-Barnes<sup>1</sup>, K. L. Urschel<sup>1</sup>, A. L. Wagner<sup>2</sup>, <sup>1</sup>University of Kentucky, Lexington, KY, USA, <sup>2</sup>Cooperative Research Farms, Richmond, VA, USA.

## Production & Management: Graduate Student Competition (2)

Moderators: TBD

Location: Sabal (Jacaranda Hall)

### ABSTRACT #

- 11:00 AM 85 **Effects of rotational versus continuous grazing on horse condition and plant performance.**  
L. B. Kenny\*<sup>1</sup>, A. O. Burk<sup>2</sup>, C. A. Williams<sup>1</sup>, <sup>1</sup>Rutgers, the State University of New Jersey, New Brunswick, NJ, USA, <sup>2</sup>University of Maryland, College Park, MD, USA.
- 11:15 AM 86 **Forage nutritive value, yield, and preference of warm season grasses grazed by horses in the upper Midwest.**  
M. L. Schultz\*, C. C. Sheaffer, D. N. Catalano, A. M. Grev, K. L. Martinson, University of Minnesota, St. Paul, MN, USA.
- 11:30 AM 87 **Influence of forage type on rate of intake, mastication and saliva production.**  
E. Lee\*, T. Fraguera, L. K. Warren, University of Florida, Gainesville, FL, USA.
- 11:45 AM 88 **Supplement use and perceptions: A survey of US horse owners.**  
N. K. Swirsley\*, H. S. Spooner, R. M. Hoffman, Middle Tennessee State University, Murfreesboro, TN, USA.

## Undergraduate Student Competition (2)

Moderators: TBD

Location: Jasmine (Jacaranda Hall)

### ABSTRACT #

- 11:00 AM 6 **The effect of fat supplementation on behavior and glycemic response in horses.**  
K. E. Martin\*, R. M. Hoffman, H. S. Spooner, Middle Tennessee State University, Murfreesboro, TN, USA.
- 11:15 AM 7 **Effects of rotational grazing on water-soluble carbohydrate and energy content of horse pastures.**  
A. D. Daniel\*<sup>1</sup>, B. J. McIntosh<sup>2</sup>, J. D. Plunk<sup>1</sup>, M. Webb<sup>1</sup>, D. McIntosh<sup>1</sup>, A. G. Parks<sup>1</sup>, <sup>1</sup>University of Tennessee, Knoxville, TN, USA, <sup>2</sup>Virginia Tech, Blacksburg, VA, USA.
- 11:30 AM 8 **The effects of rotational grazing on forage biomass yield and botanical composition of horse pastures.**  
A. M. Virostek\*<sup>2</sup>, B. McIntosh<sup>1,2</sup>, A. Daniel<sup>1</sup>, M. Webb<sup>1</sup>, J. D. Plunk<sup>1</sup>, <sup>1</sup>University of Tennessee, Knoxville, TN, USA, <sup>2</sup>Virginia Polytechnic Institute and State University, Blacksburg, VA, USA.
- 11:45 AM 9 **An investigation into miRNAs in the equine epididymis as a potential regulators of spermatozoal maturation.**  
A. D. Belk\*, K. M. Klohonatz, G. J. Bouma, J. E. Bruemmer, Colorado State University, Fort Collins, CO, USA.

## Invited Speaker Luncheon – Nutrition

Moderator: TBD

Location: Island Ballroom (Tarpon/Sawyer/Long Key)

- 12:00 PM **Buffet Lunch Service begins**
- 12:30 PM **Feeding wild animals, including the horse's exotic relatives.**  
Eduardo Valdes, Disney's Animal Kingdom, Animal Nutrition Center, Lake Buena Vista, FL, USA.

## Nutrition: Graduate Student Competition (3)

Moderators: TBD

Location: Tarpon Key (Island Ballroom)

### ABSTRACT #

- 1:45 PM 47 **Effects of transitioning from a fescue hay diet to a spring fescue pasture diet on plasma fructosamine, body weights, and body condition scores of stock horse mares.**  
P. A. Montgomery\*, C. E. Anderson, E. Grey, L. Brown, Western Kentucky University, Bowling Green, KY, USA.

- 2:00 PM 48 **Effect of dietary chromium propionate on plasma C-peptide concentrations of Quarter Horse geldings.**  
E. W. Goertzen\*, K. E. Lloyd, J. W. Spears, P. M. Siciliano, S. E. Pratt-Phillips, *North Carolina State University, Raleigh, NC, USA.*
- 2:15 PM 49 **Influence of oat  $\beta$ -glucan on postprandial glycemic and insulinemic responses to a meal or oral sugar.**  
J. Weir\*, V. Robbins, J. M. Bobel, L. A. Skurupey, L. K. Warren, *University of Florida, Gainesville, FL, USA.*
- 2:30 PM 50 **Comparative digestibility of dry matter, protein, and fiber between the horse and black rhinoceros.**  
K. E. Sullivan\*<sup>1,2</sup>, S. R. Lavin<sup>1,2</sup>, S. E. Livingston<sup>1</sup>, M. Knutson<sup>1</sup>, E. V. Valdes<sup>1,2</sup>, L. K. Warren<sup>1</sup>, <sup>1</sup>*Disney's Animal Kingdom, Lake Buena Vista, FL, USA,* <sup>2</sup>*University of Florida, Gainesville, FL, USA.*
- 2:45 PM 51 **Accounting for variation in phosphorus digestibility estimates.**  
A. L. Fowler\*, B. E. Harlow, M. B. Pyles, S. H. Hayes, A. D. Crum, L. M. Lawrence, *University of Kentucky, Lexington, KY, USA.*
- 3:00 PM 52 **Digestible energy intakes of thirty-five horses over a 42-d period.**  
J. C. Gill\*, K. E. Lloyd, M. A. Hastings, P. D. Siciliano, S. E. Pratt-Phillips, *North Carolina State University, Raleigh, NC, USA.*
- 3:15 PM 53 **Application of mathematical multi-compartmental models to digesta retention parameters in horses.**  
T. L. Hansen\*, A. L. Fowler, B. E. Harlow, V. Bill, V. Stilwell, A. Crum, S. H. Hayes, L. M. Lawrence, *University of Kentucky, Lexington, KY, USA.*
- 3:30 PM **Refreshment Break** (Banyan Breezeway)

## Production & Management: Graduate Student Competition (3)

Moderators: TBD

Location: Sabal (Jacaranda Hall)

### ABSTRACT #

- 1:45 PM 89 **A survey of anthelmintic methods for horses used in trail riding or ranch horse competitions.**  
C. O'Hara\*<sup>1</sup>, G. W. Webb<sup>1</sup>, H. L. Brady<sup>2</sup>, E. L. Walker<sup>1</sup>, S. Sacra<sup>2</sup>, <sup>1</sup>*Missouri State University, Springfield, MO, USA,* <sup>2</sup>*Texas Tech University, Lubbock, TX, USA.*
- 2:00 PM 90 **Exhibitors' perception of management, training, and competition practices effects on horse welfare.**  
M. Voigt\*<sup>1</sup>, K. Waite<sup>2</sup>, A. Borron<sup>3</sup>, K. Hiney<sup>4</sup>, C. Brady<sup>1</sup>, <sup>1</sup>*Purdue University, West Lafayette, IN, USA,* <sup>2</sup>*Michigan State University, East Lansing, MI, USA,* <sup>3</sup>*University of Georgia, Athens, GA, USA,* <sup>4</sup>*Oklahoma State University, Stillwater, OK, USA.*
- 2:15 PM 91 **Effects of GastroTech on equine gastric ulcer syndrome (EGUS).**  
A. L. Conover\*<sup>1</sup>, A. M. Shultz<sup>1</sup>, A. L. Wagner<sup>2</sup>, P. M. Graham-Thiers<sup>3</sup>, C. A. Shea Porr<sup>1</sup>, <sup>1</sup>*Murray State University, Murray, KY, USA,* <sup>2</sup>*Cooperative Research Farms, Richmond, VA, USA,* <sup>3</sup>*Emory & Henry College, Emory, VA, USA.*
- 2:30 PM 92 **A preliminary study examining the digital cushion in horses.**  
M. A. Gunkelman\*, C. J. Hammer, *North Dakota State University, Fargo, ND, USA.*
- 2:45 PM 93 **Relationship of ocular and rectal temperatures as indicators of health status in horses.**  
H. C. Collins\*<sup>1</sup>, J. L. Leatherwood<sup>1</sup>, M. J. Anderson<sup>1</sup>, M. M. Beverly<sup>1</sup>, F. X. Yildiz<sup>1</sup>, N. L. Walker<sup>2</sup>, K. B. Pritchett<sup>1</sup>, <sup>1</sup>*Sam Houston State University, Huntsville, TX, USA,* <sup>2</sup>*Louisiana State University, Baton Rouge, LA, USA.*
- 3:00 PM 94 **Estimation of actual and ideal bodyweight for adult draft and warmblood horse breeds using morphometric measurements.**  
D. N. Catalano\*<sup>1</sup>, R. J. Coleman<sup>2</sup>, M. R. Hathaway<sup>1</sup>, M. E. McCue<sup>1</sup>, A. K. Rendahl<sup>1</sup>, A. M. Hansen<sup>1</sup>, K. L. Martinson<sup>1</sup>, <sup>1</sup>*University of Minnesota, St. Paul, MN, USA,* <sup>2</sup>*University of Kentucky, Lexington, KY, USA.*
- 3:15 PM 95 **Estimation of forces generated by a jockey using the padded whip in a routine jump out.**  
J. A. Dodd\*<sup>1</sup>, G. K. Noble<sup>1</sup>, P. K. Knight<sup>2</sup>, <sup>1</sup>*Charles Sturt University, Wagga Wagga, NSW, Australia,* <sup>2</sup>*University of Sydney, Sydney, NSW, Australia.*
- 3:30 PM **Refreshment Break** (Banyan Breezeway)

## Reproductive Physiology: Graduate Student Competition (1)

Moderators: TBD

Location: **Glades (Jacaranda Hall)**

### ABSTRACT #

- 1:45 PM 126 **The presence of focal adhesion molecules in equine endometrium during maternal recognition of pregnancy.**  
K. M. Klohonatz\*, G. J. Bouma, J. E. Bruemmer, *Colorado State University, Fort Collins, CO, USA.*
- 2:00 PM 127 **Use of intravaginal triptorelin gel for ovulation induction in mares.**  
C. D. Sinclair\*<sup>1</sup>, J. M. Kouba<sup>1</sup>, L. W. Murray<sup>1</sup>, T. L. Douthit<sup>1</sup>, D. M. Grieger<sup>1</sup>, S. K. Webel<sup>2</sup>, <sup>1</sup>*Kansas State University, Manhattan, KS, USA,* <sup>2</sup>*JBS United, Sheridan, IN, USA.*
- 2:15 PM 128 **Comparison of prolactin responses to repetitive cabergoline treatments in two consecutive years in mares.**  
E. L. Oberhaus\*<sup>1</sup>, D. L. Thompson<sup>1</sup>, N. A. Valencia<sup>1</sup>, R. M. Gilley<sup>2</sup>, <sup>1</sup>*Louisiana State University Agricultural Center, Baton Rouge, LA, USA,* <sup>2</sup>*BioRelease Technologies, LLC, Birmingham, AL, USA.*
- 2:30 PM 129 **Effects of feeding a yeast-based supplement containing selenized yeast, vitamin E and a DHA-rich microalgae on sperm motion characteristics.**  
L. D. Goedde\*<sup>1</sup>, K. M. Brennan<sup>2</sup>, B. A. Ball<sup>1</sup>, L. M. Lawrence<sup>1</sup>, M. H. Troedsson<sup>1</sup>, E. L. Squires<sup>1</sup>, <sup>1</sup>*University of Kentucky, Lexington, KY, USA,* <sup>2</sup>*Center for Animal Nutrigenomics and Applied Animal Nutrition, Alltech Inc, Nicholasville, KY, USA.*
- 2:45 PM 130 **Effect of dietary omega-3 supplementation on equine endometrial and embryonic gene expression.**  
R. D. Jacobs\*<sup>1</sup>, A. D. Ealy<sup>1</sup>, P. M. Pennington<sup>2,3</sup>, B. Pukazhenth<sup>2</sup>, L. K. Warren<sup>4</sup>, A. L. Wagner<sup>5</sup>, A. K. Johnson<sup>6</sup>, T. M. Hess<sup>7</sup>, R. K. Splan<sup>1,8</sup>, <sup>1</sup>*Virginia Polytechnic Institute and State University, Blacksburg, VA, USA,* <sup>2</sup>*Smithsonian Conservation Biology Institute, Front Royal, VA, USA,* <sup>3</sup>*George Mason University, Fairfax, VA, USA,* <sup>4</sup>*University of Florida, Gainesville, FL, USA,* <sup>5</sup>*Cooperative Research Farms, Richmond, VA, USA,* <sup>6</sup>*Auburn University, Auburn, AL, USA,* <sup>7</sup>*Colorado State University, Fort Collins, CO, USA,* <sup>8</sup>*Virginia Tech MARE Center, Middleburg, VA, USA.*
- 3:00 PM 131 **Effect of docosahexaenoic acid supplementation on corpus luteum perfusion at day seven post-ovulation.**  
R. L. Piersanti\*, A. M. Adkin, L. K. Warren, C. J. Mortensen, *University of Florida, Gainesville, FL, USA.*
- 3:15 PM 132 **Identification of GnRH isoforms and their cognate receptors in the equine testis.**  
C. J. Douthit\*<sup>1</sup>, R. A. Cederberg<sup>2</sup>, A. T. Desaulniers<sup>2</sup>, J. M. Kouba<sup>1</sup>, T. L. Douthit<sup>1</sup>, D. M. Grieger<sup>1</sup>, B. R. White<sup>2</sup>, <sup>1</sup>*Kansas State University, Manhattan, KS, USA,* <sup>2</sup>*University of Nebraska, Lincoln, NE, USA.*
- 3:30 PM **Refreshment Break (Banyan Breezeway)**

## Undergraduate Student Competition (3)

Moderators: TBD

Location: **Jasmine (Jacaranda Hall)**

### ABSTRACT #

- 1:45 PM 10 **Oat  $\beta$ -glucan does not mitigate changes to leukocyte populations in response to stress.**  
M. R. Di-Lernia\*, J. M. Bobel, J. R. Abbott, M. T. Long, L. K. Warren, *University of Florida, Gainesville, FL, USA.*
- 2:00 PM 11 **Intestinal absorption of different vitamin K compounds in the horse.**  
J. E. Skinner\*<sup>1</sup>, A. J. Cawdell-Smith<sup>1</sup>, J. R. Biffen<sup>2</sup>, A. M. Talbot<sup>2</sup>, H. L. Regtop<sup>2</sup>, W. L. Bryden<sup>1</sup>, <sup>1</sup>*Equine Research Unit, The University of Queensland, Gatton, Queensland, Australia,* <sup>2</sup>*Agricure Pty Ltd, Braemar, New South Wales, Australia.*
- 2:15 PM 12 **Effects of horse age and feeding status on AMPK activation in horses.**  
S. E. Sivinski\*, A. L. Wagner, S. L. Tanner, T. Brewster-Barnes, K. L. Urschel, *University of Kentucky, Lexington, KY, USA.*
- 2:30 PM 13 **Tumor necrosis factor- $\alpha$  gene expression before and after exercise in middle-aged and older horses.**  
M. M. Darby\*<sup>1</sup>, S. R. Malone<sup>1</sup>, D. W. Horohov<sup>2</sup>, D. E. Chappell<sup>1</sup>, <sup>1</sup>*Morehead State University, Morehead, KY, USA,* <sup>2</sup>*University of Kentucky, Lexington, KY, USA.*
- 2:45 PM 14 **Weight load does not affect equine stress as measured by heart rate, salivary cortisol, and behavior.**  
M. M. Ernst\*, L. R. Hamm, M. L. Santiago, C. A. Shea Porr, *Murray State University, Murray, KY, USA.*

- 3:00 PM 15 **The effects of interval versus continuous conditioning on physiological and kinematic parameters of equine fitness.**  
L. M. Taylor\*, K. J. Duberstein, K. K. Turner, *University of Georgia, Athens, GA, USA.*
- 3:15 PM 16 **Wearable biometric sensors for horses and rider-centered interface.**  
R. E. LeRoy\*<sup>1</sup>, Z. Cochran<sup>2</sup>, A. G. Foster<sup>1</sup>, J. A. Wilson<sup>1</sup>, <sup>1</sup>*Berry College, Mount Berry, GA, USA*, <sup>2</sup>*Georgia Institute of Technology, Atlanta, GA, USA.*
- 3:30 PM **Refreshment Break** (Banyan Breezeway)

## Production & Management: Graduate Student Competition (4)

Moderators: TBD

Location: **Sabal (Jacaranda Hall)**

### ABSTRACT #

- 4:00 PM 96 **Effects of dietary calcium level and source on environmentally relevant phosphorus excretion in horses.**  
L. A. Skurupey\*<sup>1</sup>, C. M. Latham<sup>1</sup>, P. A. Harris<sup>2</sup>, L. K. Warren<sup>1</sup>, <sup>1</sup>*University of Florida, Gainesville, FL, USA*, <sup>2</sup>*WALTHAM Centre for Pet Nutrition, Melton Mowbray, Leicestershire, UK.*
- 4:15 PM 97 **Effect of inulin chain length on fermentation by equine fecal bacteria and *Streptococcus bovis* in vitro.**  
B. E. Harlow\*<sup>1</sup>, L. M. Lawrence<sup>1</sup>, I. A. Kagan<sup>2,1</sup>, M. D. Flythe<sup>2,1</sup>, <sup>1</sup>*University of Kentucky, Lexington, KY, USA*, <sup>2</sup>*USDA, Agricultural Research Service, Forage-Animal Production Research Unit, Lexington, KY, USA.*
- 4:30 PM 98 **The effect of dry versus soaked hay on glycemic response in horses.**  
J. L. Collins\*, R. M. Hoffman, H. S. Spooner, *Middle Tennessee State University, Murfreesboro, TN, USA.*
- 4:45 PM 99 **Characterization of lipid and inflammatory profiles in horses with equine metabolic syndrome.**  
S. E. Elzinga\*<sup>1</sup>, P. L. Wood<sup>2</sup>, A. A. Adams<sup>1</sup>, <sup>1</sup>*University of Kentucky, Lexington, KY, USA*, <sup>2</sup>*Lincoln Memorial University, Harrogate, TN, USA.*

## Reproductive Physiology: Graduate Student Competition (2)

Moderators: TBD

Location: **Glades (Jacaranda Hall)**

### ABSTRACT #

- 4:00 PM 133 **Differential miRNA expression from sperm obtained in the different regions of the stallion epididymis.**  
H. M. Twenter\*, K. M. Klohonatz, A. D. Belk, L. D. Bass, G. J. Bouma, J. E. Bruemmer, *Colorado State University, Fort Collins, CO, USA.*
- 4:15 PM 134 **L-Carnitine and pyruvate inclusion in diluents for cold-stored stallion spermatozoa.**  
D. S. Potter\*, G. W. Webb, B. Onyango, T. Northcutt, *Missouri State University, Springfield, MO, USA.*
- 4:30 PM 135 **Effect of hydrogen peroxide and heat stress on stallion sperm function.**  
A. M. Mesa\*, R. L. Roberson, R. I. Chun, C. J. Mortensen, *University of Florida, Gainesville, FL, USA.*

## Teaching & Extension: Graduate Student Competition

Moderator: TBD

Location: **Tarpon Key (Jacaranda Hall)**

### ABSTRACT #

- 4:00 PM 146 **Differing levels of experience and education affect learners' changes in knowledge and skills.**  
M. L. Bedron\*, M. L. Santiago, C. A. Shea Porr, *Murray State University, Murray, KY, USA.*
- 4:15 PM 147 **Assessing the effect of an equine training course on the knowledge and practical skill acquisition of incoming freshman.**  
T. K. Taylor\*, S. R. Cooper, K. M. Hiney, *Oklahoma State University, Stillwater, OK, USA.*
- 4:30 PM 148 **Information-seeking behavior of the horse competition industry: A demographic study.**  
E. A. Lofgren\*, M. A. Voigt, C. M. Brady, *Purdue University, West Lafayette, IN, USA.*
- 4:45 PM 149 **Effectiveness of eXtension online webinars as educational tools for current horse industry issues.**  
K. E. Pulec\*<sup>1</sup>, K. P. Anderson<sup>1</sup>, C. Skelly<sup>2</sup>, C. M. Brady<sup>3</sup>, B. J. McIntosh<sup>6</sup>, G. A. Shelle<sup>2</sup>, A. Griffin<sup>4</sup>, E. A. Greene<sup>5</sup>, <sup>1</sup>*University of Nebraska, Lincoln, NE, USA*, <sup>2</sup>*Michigan State University, East Lansing, MI, USA*, <sup>3</sup>*Purdue University, West Lafayette, IN, USA*, <sup>4</sup>*eXtension, Lexington, KY, USA*, <sup>5</sup>*University of Vermont, Burlington, VT, USA*, <sup>6</sup>*Virginia Tech, Middleburg, VA, USA.*

## Undergraduate Student Competition (4)

Moderators: TBD

Location: **Jasmine (Jacaranda Hall)**

### ABSTRACT #

- 4:00 PM 17 **Demographics, body condition scores, and owner bodyweight estimations of adult draft and warmblood horse breeds.**  
A. M. Hansen\*<sup>1</sup>, D. N. Catalano<sup>1</sup>, R. J. Coleman<sup>2</sup>, M. R. Hathaway<sup>1</sup>, M. E. McCue<sup>1</sup>, A. K. Rendahl<sup>1</sup>, K. L. Martinson<sup>1</sup>, <sup>1</sup>*University of Minnesota, St. Paul, MN, USA*, <sup>2</sup>*University of Kentucky, Lexington, KY, USA*.
- 4:15 PM 18 **Effect of different blanket weights on surface temperature of horses in cold environments.**  
C. S. Slaubaugh\* and C. J. Hammer, *North Dakota State University, Fargo, ND, USA*.
- 4:30 PM 19 **Effects of ivermectin and moxidectin on equine parasites in horses in western Kentucky.**  
L. R. Hamm\*, M. M. Ernst, M. L. Santiago, C. A. Shea Porr, *Murray State University, Murray, KY, USA*.
- 4:45 PM 20 **Efficacy of *Carica papaya* seeds for reducing equine strongyle fecal egg counts.**  
S. Samuels\*, N. Heskett, S. Burk, *Otterbein University, Westerville, OH, USA*.

## WORKSHOP

- 5:15 – 6:45 PM **The internet of things: Using innovation to enhance teaching and extension.**  
Leaders: Karen L. Waite, Colleen Brady, Kathy Anderson, and Craig Wood  
Location: **Island Ballroom (Tarpon/Sawyer/Long Key)**

## OTHER ACTIVITIES

### Gator Growl Dinner

7:00 – 9:00 PM

Location: **Garden Courtyard (outdoors)**

## Thursday, May 28

### Invited Speaker – Genetics

Moderator: TBD

Location: **Island Ballroom (Tarpon/Sawyer/Long Key)**

- 8:00 AM **Genetics After TWILIGHT.**  
Ernie Bailey, *Gluck Equine Research Center, University of Kentucky, Lexington, KY, USA*.

## POSTER PRESENTATIONS

All posters will be located in the Banyan Breezeway. Posters need to be in place by 10:00 AM on Wednesday May 27. Posters should remain in place until Friday May 29 at 5:00 PM. An author must be present at the poster during its section's designated poster session.

- 9:00 – 9:30 AM **Refreshment Break**
- 9:00 – 10:30 AM **Poster Session #1 (Exercise Physiology, Genetics, Nutrition, and Reproductive Physiology)**

### Exercise Physiology: Posters

Chair: **Tanja Hess**

Location: **Banyan Breezeway**

### ABSTRACT #

- 29 **Attitude and behavior of veterinarians surrounding the use of complementary and alternative veterinary medicine (CAVM) in the treatment of equine musculoskeletal pain.**  
A. E. Bergenstrahle\*<sup>1</sup>, B. D. Nielsen<sup>2</sup>, <sup>1</sup>*University of Edinburgh, Edinburgh, Scotland*, <sup>2</sup>*Michigan State University, East Lansing, MI, USA*.



- 30 **Post-exercise dietary supplementation leads to improved muscle recovery in fatigued horses.**  
R. D. Jacobs\*<sup>1</sup>, R. K. Splan<sup>1,2</sup>, K. L. Urschel<sup>3</sup>, S. Mastellar<sup>4</sup>, A. L. Wagner<sup>5</sup>, <sup>1</sup>Virginia Tech, Blacksburg, VA, USA, <sup>2</sup>Virginia Tech Middleburg Agricultural Research and Extension Center, Middleburg, VA, USA, <sup>3</sup>University of Kentucky, Lexington, KY, USA, <sup>4</sup>South Dakota State University, Brookings, SD, USA, <sup>5</sup>Cooperative Research Farms, Richmond, VA, USA.
- 31 **Double suspension gallop in the Thoroughbred race horse—A pilot study.**  
A. Owens, S. N. Timberlake, A. Youmans, J. V. Downer\*, *College of Central Florida, Ocala, FL, USA.*
- 32 **An assessment of gait symmetry at the trot in non-loaded horses compared with symmetrical and asymmetrical load distribution.**  
K. J. Duberstein\*, S. Lalvani, L. Cobb, H. Newman, *University of Georgia, Athens, GA, USA.*
- 33 **Stride variables of the intermediate stepping gaits of the Choctaw horse.**  
M. Nicodemus\*<sup>1</sup>, J. Beranger<sup>2</sup>, <sup>1</sup>Mississippi State University, Mississippi State, MS, USA, <sup>2</sup>Livestock Conservancy, Pittsboro, NC, USA.

## Nutrition: Posters

Chair: Amy Burk

Location: Banyan Breezeway

### ABSTRACT #

- 65 **Effect of storage time and temperature of equine feces on the subsequent enumeration of lactobacilli and cellulolytic bacteria.**  
B. E. Harlow\*<sup>1</sup>, L. M. Lawrence<sup>1</sup>, M. D. Flythe<sup>2,1</sup>, <sup>1</sup>University of Kentucky, Lexington, KY, USA, <sup>2</sup>USDA, Agricultural Research Service, Forage-Animal Production Research Unit, Lexington, KY, USA.
- 66 **Changes in fecal lactobacilli after a concentrate meal.**  
M. B. Pyles\*<sup>1</sup>, L. M. Lawrence<sup>1</sup>, M. D. Flythe<sup>2,1</sup>, <sup>1</sup>University of Kentucky, Lexington, KY, USA, <sup>2</sup>United States Department of Agriculture, ARS-FAPRU, Lexington, KY, USA.
- 67 **Influence of maternal dietary yeast supplementation on the diversity of hindgut microbial populations of Quarter Horse mares and their offspring.**  
E. R. Share, K. Barnhart, J. M. Reddish, K. Cole\*, *The Ohio State University, Columbus, OH, USA.*
- 68 **Supplementation with *Lactobacillus acidophilus* influences microbial diversity in the gastrointestinal tracts of healthy horses.**  
K. Barnhart, J. M. Reddish, K. Cole\*, *The Ohio State University, Columbus, OH, USA.*
- 69 **Influence of probiotic supplementation on microbial diversity in the gastrointestinal tract of Miniature Horses.**  
K. Barnhart, J. M. Reddish, K. Cole\*, *The Ohio State University, Columbus, OH, USA.*
- 70 **Dietary energy influences on water intake and fecal and urine outputs in mature horses.**  
M. J. Williams\*, E. R. Share, K. L. Barnhart, K. Cole, *The Ohio State University, Columbus, OH, USA.*
- 71 **Effects of the novel feed additive Phytozen on immune and endocrine function in senior horses.**  
M. H. Siard\*, A. L. Wagner, B. Médina, I. D. Girard, A. A. Adams, *University of Kentucky, Saint-Hyacinthe, Quebec, Canada.*
- 72 **Immunoglobulin subclasses in colostrum and plasma of Quarter Horse mares and foals fed diets with or without added probiotics.**  
A. Sutton, A. Moffett, W. B. Staniar\*, P. Harris, *The Pennsylvania State University, Waltham on the Wolds, Leicestershire, UK.*
- 73 **Crude protein from forage correlates with nitrogen retention and nitrogen status in adult horses.**  
P. M. Graham-Thiers\*, L. K. Bowen, *Emory & Henry College, Emory, VA, USA.*
- 74 **Novel method for determining the ideal amino acid profile for a growing horse's ration.**  
M. Schultz\*, K. Martinson, C. Ward, M. Pampusch, M. Hathaway, *University of Minnesota, St. Paul, MN, USA.*
- 75 **A technique for collecting ileal digesta through cecal cannulas in the equine.**  
T. K. Dove\*, J. M. Lattimer, W. L. Beard, E. A. Taylor, T. L. Douthit, *Kansas State University, Manhattan, KS, USA.*
- 76 **Validation of a human double-antibody radioimmunoassay kit for measuring equine C-peptide.**  
E. W. Goertzen\*, K. E. Lloyd, J. W. Spears, P. M. Siciliano, S. E. Pratt-Phillips, *North Carolina State University, Raleigh, NC, USA.*
- 77 **Influence of bioactive proteins in varying doses on gait kinematics in mature horses.**  
J. A. Coverdale\*<sup>1</sup>, J. M. Campbell<sup>2</sup>, <sup>1</sup>Texas A&M University, College Station, TX, USA, <sup>2</sup>APC Inc, Ankeny, IA, USA.

- 78 **Influence of omega-3 polyunsaturated fatty acid supplementation on plasma prostaglandin E2 production in young exercising horses.**  
K. B. Pritchett\*, J. L. Leatherwood, B. Vandergrift, M. J. Anderson, K. J. Stutts, M. M. Beverly, S. F. Kelley, *EquiVision, Inc, Huntsville, TX, USA.*
- 79 **Feeding free-choice hay to starving horses.**  
T. M. Hess\*, C. Wilkins, H. F. Santos, *Colorado State University, Fort Collins, CO, USA.*

## Genetics: Posters

Chair: **Rebecca Splan**

Location: **Banyan Breezeway**

### ABSTRACT #

- 37 **Genome-wide association study of Shivers.**  
J. L. Petersen\*<sup>1</sup>, C. J. Finno<sup>2</sup>, S. J. Valberg<sup>3</sup>, <sup>1</sup>*University of Nebraska, Lincoln, NE, USA,* <sup>2</sup>*University of California, Davis, CA, USA,* <sup>3</sup>*University of Minnesota, St. Paul, MN, USA.*

## Reproductive Physiology: Posters

Chair: **Heidi Brady**

Location: **Banyan Breezeway**

### ABSTRACT #

- 140 **Effects of resveratrol on post-thaw quality of stallion sperm.**  
K. Matheny, R. Hopper, H. King, E. Memili, M. Nicodemus\*, *Mississippi State University, Mississippi State, MS, USA.*
- 141 **Prolactin secretion in estrogen-primed geldings: Effect of dose and site of injection of sulpiride in a vegetable shortening vehicle.**  
D. L. Thompson\*<sup>1</sup>, E. L. Oberhaus<sup>1</sup>, J. C. Ferreira<sup>1,2</sup>, N. A. Valencia<sup>1</sup>, <sup>1</sup>*Louisiana State University Agricultural Center, Baton Rouge, LA, USA,* <sup>2</sup>*School of Veterinary Medicine and Animal Science, UNESP, Botucatu, SP, Brazil.*
- 142 **Factors affecting basal and post-exercise prolactin secretion in horses.**  
L. C. DiGiovanni, D. L. Thompson\*, N. A. Valencia, E. L. Oberhaus, *Louisiana State University Agricultural Center, Baton Rouge, LA, USA.*
- 143 **Influence of dietary oil source on reproductive parameters in mares.**  
C. M. Crain\*<sup>1,2</sup>, J. C. Haffner<sup>1</sup>, R. M. Hoffman<sup>1</sup>, H. S. Spooner<sup>1</sup>, <sup>1</sup>*Middle Tennessee State University, Murfreesboro, TN, USA,* <sup>2</sup>*Fort Scott Community College, Fort Scott, KS, USA.*
- 144 **Transvaginal ultrasound-guided biopsy as a tool for evaluation of corpora lutea in mares.**  
J. C. Ferreira\*<sup>1,2</sup>, D. L. Thompson<sup>2</sup>, Y. L. Boakari<sup>1</sup>, P. F. Lima<sup>3</sup>, R. Schmith<sup>1</sup>, C. Meira<sup>1</sup>, <sup>1</sup>*School of Veterinary Medicine and Animal Science, UNESP, Botucatu, São Paulo, Brazil,* <sup>2</sup>*Louisiana State University Agricultural Center, Baton Rouge, LA, USA,* <sup>3</sup>*Biosciences Institute, UNESP, Botucatu, São Paulo, Brazil.*
- 145 **Progesterone-releasing intravaginal device in conjunction with estradiol benzoate induces follicular regression in mares.**  
J. C. Ferreira\*<sup>1,2</sup>, D. L. Thompson<sup>2</sup>, A. Boof<sup>3</sup>, <sup>1</sup>*School of Veterinary Medicine and Animal Science, UNESP, Botucatu, SP, Brazil,* <sup>2</sup>*Louisiana State University Agricultural Center, Baton Rouge, LA, USA,* <sup>3</sup>*Águas JM Horse Farm, Tijucas do Sul, PR, Brazil.*

## WORKSHOPS

- 11:00AM – 12:30PM **Undergraduate program assessment and accreditation – Building a collaborative peer based model.**  
Leaders: Karin Bump, Laurie Lawrence, Michael Fugaro, and Bob Coleman  
Location: Sabal (Jacaranda Hall)
- 11:00AM – 12:30PM **Determining equine digestibility coefficients – Can we define criteria for a standardized research protocol?**  
Leaders: David van Doorn and Femke Schaafstra  
Location: Jasmine (Jacaranda Hall)
- 12:30 – 2:00PM **Lunch on your own**

- 2:00 – 3:30PM **Equitation science & learning theory – A strategic approach to enhancing equine behavior and welfare curriculum.**  
 Leaders: Camie Heleski, Colleen Brady, Betsy Greene, Katrina Merkies, Karen Waite, and Carissa Wickens  
 Location: Sabal (Jacaranda Hall)
- 2:00 – 3:30PM **Tips for reappointment, promotion, and tenure.**  
 Leaders: Amy Burk, Laurie Lawrence, and Karin Bump  
 Location: Jasmine (Jacaranda Hall)

## OTHER ACTIVITIES

### Student Social

Chair: **Brittany Harlow**

**7:00 – 9:00 PM**

Location: **Breck Beach (outdoors, in front of Breck Deck North)**

**Friday, May 29**

## ORAL PRESENTATIONS & SYMPOSIA

### Invited Speaker – Teaching & Extension

Moderator: **TBD**

Location: **Island Ballroom (Tarpon/Sawyer/Long Key)**

- 8:00 AM **Donkeys are Different.**  
 Alex Thiemann, *The Donkey Sanctuary, Sidmouth, Devon, United Kingdom*

### Nutrition: General Session (1)

Moderator: **TBD**

Location: **Sabal (Jacaranda Hall)**

#### ABSTRACT #

- 9:15 AM 54 **Preliminary study on the effect of DHA-Yeast enriched product supplementation.**  
 P. Grimm\*, V. Julliand, *Agrosup Dijon, Dijon, Bourgogne, France.*
- 9:30 AM 55 **The effect of n-3 polyunsaturated fatty acids (DHA) and prebiotic supplementation on inflammatory cytokine production and immune responses to vaccination in old horses.**  
 A. A. Adams\*<sup>1</sup>, K. R. Vineyard<sup>2</sup>, M. E. Gordon<sup>2</sup>, S. Reedy<sup>1</sup>, M. H. Siard<sup>1</sup>, D. W. Horohov<sup>1</sup>, <sup>1</sup>*University of Kentucky, Lexington, KY, USA,* <sup>2</sup>*Purina Animal Nutrition, Gray Summit, MO, USA.*
- 9:45 AM 56 **Effect of pituitary pars intermedia dysfunction in horses on glucose and glutamine transport in jejunal brush border membrane vesicles.**  
 J. L. De Vries<sup>1</sup>, H. C. Schott<sup>1</sup>, C. Diard<sup>2</sup>, D. P. Chamberlin<sup>1</sup>, N. L. Trottier\*<sup>1</sup>, <sup>1</sup>*Michigan State University, East Lansing, MI, USA,* <sup>2</sup>*Institut National Supérieur des Sciences Agronomiques de l'Alimentation et de l'Environnement, Dijon, France.*
- 10:00 AM 57 **Evaluation of apparent total tract digestibility and glycemic responses to processed corn in non-exercised Thoroughbred horses.**  
 C. Whitehouse\*<sup>1</sup>, J. D. Pagan<sup>1</sup>, R. J. Coleman<sup>2</sup>, B. Waldridge<sup>1</sup>, O. L. Yates<sup>1</sup>, S. W. Garling<sup>1</sup>, <sup>1</sup>*Kentucky Equine Research, Versailles, KY, USA,* <sup>2</sup>*University of Kentucky, Lexington, KY, USA.*
- 10:15 AM 58 **Effect of non-structural carbohydrate intake on glycogen repletion following intense exercise.**  
 J. D. Pagan\*<sup>1</sup>, V. S. Mesquita<sup>2</sup>, S. J. Valberg<sup>3</sup>, B. Waldridge<sup>1</sup>, C. Whitehouse<sup>1</sup>, <sup>1</sup>*Kentucky Equine Research, Versailles, KY, USA,* <sup>2</sup>*Universidade Estadual Paulista, Brazil,* <sup>3</sup>*University of Minnesota, St. Paul, MN, USA.*
- 10:30 AM **Refreshment Break** (Banyan Breezeway)

## Reproductive Physiology: General Session

Moderator: TBD

Location: Jasmine (Jacaranda Hall)

### ABSTRACT #

- 9:15 AM 136 **Peripartum maternal DHA/EPA supplementation and the effect on mare reproductive parameters and foal bone metabolism.**  
S. E. Buist<sup>\*1,2</sup>, J. M. Kouba<sup>2</sup>, J. D. Lillich<sup>2</sup>, C. A. Blevins<sup>2</sup>, D. G. Grieger<sup>2</sup>, J. Stevenson<sup>2</sup>, S. Weibel<sup>3</sup>, <sup>1</sup>The Pennsylvania State University, University Park, PA, USA, <sup>2</sup>Kansas State University, Manhattan, KS, USA, <sup>3</sup>JBS United, Sheridan, IN, USA.
- 9:30 AM 137 **Determination of peripheral progesterone concentrations in the late pregnant mare based upon immunoassays and liquid chromatography-tandem mass spectrometry.**  
M. A. A. Wynn<sup>\*1</sup>, E. L. Legacki<sup>2</sup>, A. J. Conley<sup>2</sup>, S. A. Loux<sup>1</sup>, A. Esteller-Vico<sup>1</sup>, S. D. Stanley<sup>2</sup>, E. L. Squires<sup>1</sup>, M. H. T. Troedsson<sup>1</sup>, B. A. Ball<sup>1</sup>, <sup>1</sup>University of Kentucky, Lexington, KY, USA, <sup>2</sup>University of California, Davis, Davis, CA, USA.
- 9:45 AM 138 **Characterization of partial luteolysis in mares.**  
J. C. Ferreira<sup>\*1,2</sup>, D. L. Thompson<sup>2</sup>, Y. L. Boakari<sup>1</sup>, H. S. Canesin<sup>1</sup>, L. F. Novaes Filho<sup>1</sup>, C. Meira<sup>1</sup>, <sup>1</sup>School of Veterinary Medicine and Animal Science, UNESP, Botucatu, SP, Brazil, <sup>2</sup>Louisiana State University Agricultural Center, Baton Rouge, LA, USA.
- 10:00 AM 139 **Non-targeted lipidomics of stallion spermatozoa: Effect of dietary docosahexaenoic acid (DHA).**  
P. L. Wood<sup>1</sup>, K. E. Scoggin<sup>2</sup>, B. A. Ball<sup>2</sup>, L. M. Lawrence<sup>2</sup>, M. H. Troedsson<sup>2</sup>, L. D. Goedde<sup>2</sup>, K. M. Brennan<sup>3</sup>, E. L. Squires<sup>\*2</sup>, <sup>1</sup>Lincoln Memorial University, Harrogate, TN, USA, <sup>2</sup>University of Kentucky, Lexington, KY, USA, <sup>3</sup>Center for Animal Nutrigenomics and Applied Animal Nutrition, Alltech Inc, Nicholasville, KY, USA.

## Teaching & Extension: General Session (1)

Moderator: TBD

Location: Glades (Jacaranda Hall)

### ABSTRACT #

- 9:15 AM 150 **Effectiveness of extension training for law enforcement officials responding to equine calls.**  
K. P. Anderson<sup>\*1</sup>, G. Stauffer<sup>1</sup>, M. Stauffer<sup>1</sup>, D. Anderson<sup>1</sup>, K. Biodrowski<sup>2</sup>, <sup>1</sup>University of Nebraska, Lincoln, NE, USA, <sup>2</sup>Nebraska Humane Society, Omaha, NE, USA.
- 9:30 AM 151 **State-level industry study to determine equine policy and program priorities.**  
K. D. Bump<sup>\*1,2</sup>, T. S. Williams<sup>1,2</sup>, <sup>1</sup>Cazenovia College, Cazenovia, NY, USA, <sup>2</sup>CJC Adventures, Cazenovia, NY, USA.
- 9:45 AM 152 **Prevention of horse-related injuries: Where education efforts should be focused.**  
F. C. Camargo<sup>\*1</sup>, W. R. Gombeski<sup>1</sup>, P. Barger<sup>3</sup>, C. Jehlick<sup>2</sup>, H. Wiemers<sup>1</sup>, J. Mead<sup>1</sup>, K. A. Lawyer<sup>1</sup>, <sup>1</sup>University of Kentucky, Lexington, KY, USA, <sup>2</sup>United States Pony Clubs, Lexington, KY, USA, <sup>3</sup>Certified Horsemanship Association, Lexington, KY, USA.
- 10:00 AM 153 **Creating and validating a survey to assess sportsmanship among horse show participants.**  
K. L. Waite<sup>\*</sup>, C. Heleski, M. Ewing, Michigan State University, East Lansing, MI, USA.
- 10:15 AM 154 **Using 4-H Common Measures to assess youth outcomes at the 2014 Eastern National 4-H Horse Round Up.**  
C. M. Brady<sup>\*1</sup>, A. E. Harris<sup>1</sup>, D. J. Hagstrom<sup>2</sup>, <sup>1</sup>Purdue University, West Lafayette, IN, USA, <sup>2</sup>University of Illinois, Urbana, IL, USA.
- 10:30 AM **Refreshment Break** (Banyan Breezeway)

## Nutrition: General Session (2)

Moderator: TBD

Location: Sabal (Jacaranda Hall)

### ABSTRACT #

- 11:00 AM 59 **Extent of vitamin K absorption from the equine hindgut.**  
J. E. Skinner<sup>\*1</sup>, A. J. Cawdell-Smith<sup>1</sup>, H. L. Regtop<sup>2</sup>, A. M. Talbot<sup>2</sup>, J. R. Biffin<sup>2</sup>, W. L. Bryden<sup>1</sup>, <sup>1</sup>Equine Research Unit, The University of Queensland, Gatton, Queensland, Australia, <sup>2</sup>Agricure Pty Ltd, Braemar, New South Wales, Australia.
- 11:15 AM 60 **Oral magnesium supplementation alters blood and urine electrolyte concentrations in horses.**  
J. A. Dodd<sup>\*1</sup>, G. Doran<sup>1</sup>, P. Harris<sup>2</sup>, G. K. Noble<sup>1</sup>, <sup>1</sup>Charles Sturt University, Wagga Wagga, NSW, Australia, <sup>2</sup>WALTHAM Centre for Pet Nutrition, Leicestershire, United Kingdom.

- 11:30 AM 61 **Effects of exercise and selenium on antioxidant status and mitochondrial function in young, pleasure-trained horses.**  
S. H. White\*, C. Li, L. A. Skurupey, S. Wohlgemuth, L. K. Warren, *University of Florida, Gainesville, FL, USA.*
- 11:45 AM 62 **Feeding practices and nutrient intakes among elite show jumpers.**  
S. E. Pratt-Phillips\*, *North Carolina State University, Raleigh, NC, USA.*
- 12:00 PM 63 **Derivation of a new body condition index to estimate body fat percentage from morphometric measurements: Comparison with body condition score.**  
S. J. Potter<sup>1</sup>, P. A. Harris<sup>2</sup>, S. R. Bailey\*<sup>1</sup>, <sup>1</sup>*University of Melbourne, Melbourne, Victoria, Australia,* <sup>2</sup>*Waltham Centre for Pet Nutrition, Melton Mowbray, Leicestershire, UK.*
- 12:15 PM 64 **Observations on the effects of selenium and molybdenum in mare diets on developmental orthopedic disease in Trakehner foals—A case study.**  
L. H. Breuer\*<sup>1</sup>, D. Langer<sup>2</sup>, <sup>1</sup>*L.H. Breuer & Assoc, Alhambra, IL, USA,* <sup>2</sup>*Wisconsin Equine Clinic and Hospital, Oconomowoc, WI, USA.*

## Production & Management: General Session (1)

Moderator: TBD

Location: **Jasmine (Jacaranda Hall)**

### ABSTRACT #

- 11:00 AM 100 **Distal forelimb asymmetries in the domestic horse.**  
S. R. Malone\*<sup>1,2</sup>, H. M. S. Davies<sup>2</sup>, <sup>1</sup>*Morehead State University, Morehead, KY, USA,* <sup>2</sup>*The University of Melbourne, Parkville, VIC, Australia.*
- 11:15 AM 101 **Measuring conformation in mules, hinnies, and donkeys (*Equus asinus*) from Spanish and Portuguese populations.**  
A. K. McLean\*<sup>1</sup>, W. Wang<sup>1,2</sup>, A. Heartfield<sup>1,3</sup>, J. B. Rodrigues<sup>1,4</sup>, <sup>1</sup>*North Carolina State University, Raleigh, NC, USA,* <sup>2</sup>*Palo Alto Medical Foundation Research Institute, Palo Alto, CA, USA,* <sup>3</sup>*Texas A&M University, College Station, TX, USA,* <sup>4</sup>*University Lusófona de Humanidades e Tecnologias, Lisbon, Portugal.*
- 11:30 AM 102 **Comparative efficacy of meloxicam oral suspension and phenylbutazone in horses with chronic musculoskeletal disease.**  
M. E. Olson<sup>1</sup>, L. D. Burwash\*<sup>2</sup>, B. J. Ralston<sup>2</sup>, D. M. Nagel<sup>3</sup>, S. L. Custead<sup>3</sup>, K. A. Penttila<sup>4</sup>, <sup>1</sup>*Bow Valley Research, Calgary, Alberta, Canada,* <sup>2</sup>*Alberta Agriculture and Rural Development, Airdrie, Alberta, Canada,* <sup>3</sup>*Nagel & Co. Veterinary Services Ltd, Crossfield, Alberta, Canada,* <sup>4</sup>*Burwash Equine Services, Calgary Alberta, Canada.*
- 11:45 AM 103 **Efficacy of meloxicam oral suspension in controlling pain and inflammation following castration in horses.**  
M. E. Olson<sup>1</sup>, E. E. Fierheller<sup>2</sup>, L. D. Burwash\*<sup>3</sup>, B. J. Ralston<sup>3</sup>, C. P. Schatz<sup>1</sup>, H. R. Matheson-Bird<sup>1</sup>, <sup>1</sup>*Bow Valley Research, Calgary, Alberta, Canada,* <sup>2</sup>*University of Calgary, Calgary, Alberta, Canada,* <sup>3</sup>*Alberta Agriculture and Rural Development, Airdrie, Alberta, Canada.*
- 12:00 PM 104 **Shade use in dry lots by captive wild horses.**  
K. E. Holcomb\*, C. L. Stull, *University of California, Davis, Population Health and Reproduction, Cooperative Extension, School of Veterinary Medicine, Davis, CA, USA.*
- 12:15 PM 105 **Association between whorls and personality in horses.**  
N. H. Sereda, T. Kellogg, T. Hoagland, J. Nadeau\*, *University of Connecticut, Storrs, CT, USA.*

## Teaching & Extension: General Session (2)

Moderator: TBD

Location: **Glades (Jacaranda Hall)**

### ABSTRACT #

- 11:00 AM 155 **Behavioral changes associated with participation in 4-H horse programs.**  
L. M. Cottle\*, L. Karr-Lilienthal, *University of Nebraska-Lincoln, Lincoln, NE, USA.*
- 11:15 AM 156 **Use of Soft Chalk technology in equine science classes to provide an interactive study tool.**  
L. M. Cottle\*, K. P. Anderson, L. Karr-Lilienthal, K. Pulec, *University of Nebraska-Lincoln, Lincoln, NE, USA.*
- 11:30 AM 157 **Delivering an online introductory horse course to a varied audience.**  
C. D. Skelly\*, K. L. Waite, G. A. Shelle, *Michigan State University, East Lansing, MI, USA.*

- 11:45 AM 158 **Teaching to the masses: Experiences in offering an equine-oriented massive open online course.**  
C. J. Mortensen\*, A. M. Nicholson, *University of Florida, Gainesville, FL, USA.*
- 12:00 PM 159 **Teaching equine courses in the flipped format is proving to be a modern approach to today's classrooms.**  
C. J. Mortensen\*, A. M. Nicholson, *University of Florida, Gainesville, FL, USA.*
- 12:15 PM 160 **A comparison of traditional versus flip-class teaching methods on student satisfaction and assessment.**  
T. N. Jones\*, *Tarleton State University, Stephenville, TX, USA.*

## Invited Speaker Luncheon – Production & Management

Moderator: TBD

Location: **Island Ballroom (Tarpon/Sawyer/Long Key)**

- 12:30 PM **Buffet Lunch Service begins**
- 1:00 PM **Equine Metabolic Syndrome: A complex disease influenced by genetics and the environment.**  
Molly McCue, *University of Minnesota, St. Paul, MN, USA*

## Exercise Physiology: General Session

Moderator: TBD

Location: **Sabal (Jacaranda Hall)**

### ABSTRACT #

- 2:15 PM 26 **Yearling radiographic forelimb asymmetries and performance in Thoroughbred racehorses.**  
S. R. Malone\*<sup>1,2</sup>, H. M. S. Davies<sup>2</sup>, <sup>1</sup>*Morehead State University, Morehead, KY, USA*, <sup>2</sup>*The University of Melbourne, Parkville, VIC, Australia.*
- 2:30 PM 27 **An online survey of feed management and electrolyte use in endurance horses in the United Kingdom.**  
D. J. Marlin\*, S. Sadler, *Oklahoma State University, Stillwater, OK, USA.*
- 2:45 PM 28 **Mitochondrial adaptations to submaximal exercise training in the gluteus medius and triceps brachii of young equine athletes.**  
S. H. White\*, L. K. Warren, C. Li, S. Wohlgemuth, *University of Florida, Gainesville, FL, USA.*

## Production & Management: General Session (2)

Moderator: TBD

Location: **Jasmine (Jacaranda Hall)**

### ABSTRACT #

- 2:15 PM 106 **Hydration, feed intake, and fecal output in horses fed hay biscuits, blocks, and long stem hay.**  
C. A. Williams\*<sup>1</sup>, L. B. Kenny<sup>1</sup>, H. Anderson<sup>2</sup>, <sup>1</sup>*Rutgers, the State University of New Jersey, New Brunswick, NJ, USA*, <sup>2</sup>*Square Meal Feeds LLC, Cokato, MN, USA.*
- 2:30 PM 107 **The effects of feeding order, time of day, and treatment adaptation on rates of hay and concentrate intake.**  
M. E. Gordon\*, K. E. Davison, M. L. Jerina, *Purina Animal Nutrition, LLC, Gray Summit, MO, USA.*
- 2:45 PM 108 **Effect of pasture sward height on blood glucose and insulin profiles in grazing horses.**  
P. D. Siciliano\*, J. C. Gill, *North Carolina State University, Raleigh, NC, USA.*
- 3:00 PM 109 **The effect of wearing grazing muzzles for 10 hours daily on bodyweight of ponies pastured for 24 hours per day.**  
A. C. Longland\*<sup>1</sup>, C. Barfoot<sup>2</sup>, P. A. Harris<sup>3</sup>, <sup>1</sup>*ELNS, Tregaron, Ceredigion, Wales, UK*, <sup>2</sup>*Mars Horse Care UK Ltd, Old Wolverton, Buckinghamshire, UK*, <sup>3</sup>*Waltham Centre for Pet Nutrition, Waltham-on-the-Wolds, Leicestershire, UK.*

## Teaching & Extension: General Session (3)

Moderator: TBD

Location: **Glades (Jacaranda Hall)**

### ABSTRACT #

- 2:15 PM 161 **Gagné and equine anatomy: A pedagogical opportunity.**  
E. L. Wagner\*, *Auburn University, Auburn, AL, USA.*

- 2:30 PM 162 **Student-oriented learning outlines positively affect student outcomes.**  
K. S. Jogan\* and, J. O. Hammons, *University of Arkansas, Fayetteville, AR, USA.*
- 2:45 PM 163 **College curricula valued by equine-assisted activity and therapy centers.**  
S. V. Burk\*<sup>1</sup>, C. E. Gramlich<sup>2</sup>, <sup>1</sup>*Otterbein University, Westerville, OH, USA,* <sup>2</sup>*Slippery Rock University, Slippery Rock, PA, USA.*
- 3:00 PM 164 **Factors associated with persistence in the animal and food sciences degree program at the University of Kentucky: From Animal Science 101 to the capstone class.**  
M. G. Rossano\*<sup>1</sup>, S. V. Burk<sup>2</sup>, A. M. Leed<sup>1</sup>, W. J. Silvia<sup>1</sup>, A. J. Pescatore<sup>1</sup>, E. S. Vanzant<sup>1</sup>, <sup>1</sup>*University of Kentucky, Lexington, KY, USA,* <sup>2</sup>*Otterbein University, Westerville, OH, USA.*
- 3:15 PM 165 **National American Collegiate Horsemen's Association Convention: an effective equine educational venue.**  
N. Walker\*<sup>1</sup>, J. Leatherwood<sup>2</sup>, R. Brooks<sup>3</sup>, C. Smith<sup>4</sup>, S. TenBroeck<sup>5</sup>, K. Vernon<sup>6</sup>, K. Waite<sup>7</sup>, M. Volgesang<sup>8</sup>, B. Egan<sup>9</sup>, E. Berg<sup>10</sup>, J. Miller<sup>11</sup>, <sup>1</sup>*Louisiana State University Agricultural Center, Baton Rouge, LA, USA,* <sup>2</sup>*Sam Houston State University, Huntsville, TX, USA,* <sup>3</sup>*Colorado State University, Fort Collins, CO, USA,* <sup>4</sup>*West Virginia University, Morgantown, WV, USA,* <sup>5</sup>*University of Florida, Gainesville, FL, USA,* <sup>6</sup>*Clemson University, Clemson, SC, USA,* <sup>7</sup>*Michigan State University, East Lansing, MI, USA,* <sup>8</sup>*Texas A&M University, College Station, TX, USA,* <sup>9</sup>*Pennsylvania State University, University Park, PA, USA,* <sup>10</sup>*North Dakota State University, Fargo, ND, USA,* <sup>11</sup>*Potomac State College, Keyser, WV, USA.*

## POSTER PRESENTATIONS

- 3:30 – 4:00 PM **Refreshment Break**
- 3:30 – 5:00 PM **Poster Session #2 (Production & Management, and Teaching & Extension)**

### Production & Management: Posters

Chair: **Janice Holland**

Location: **Banyan Breezeway**

#### ABSTRACT #

- 111 **Fecal egg count survey of feral horses on the Pryor Mountain Wild Horse Range.**  
A. N. Neuman\*, *Rocky Mountain College, Billings, MT, USA.*
- 112 **Prevalence of strongyle infection in working equids of Egypt and comparison of 3 deworming strategies.**  
A. B. A. Ali<sup>1,3</sup>, M. A. El Sayed<sup>2</sup>, M. Y. Matoock<sup>3</sup>, M. A. Fouad<sup>3</sup>, C. R. Heleski\*<sup>1</sup>, <sup>1</sup>*Michigan State University, East Lansing, MI, USA,* <sup>2</sup>*The Brooke Hospital for Animals, Cairo, Egypt,* <sup>3</sup>*Cairo University, Giza, Egypt.*
- 113 **Effects of collection method and season on fecal egg counts in feral horses.**  
K. Demme, S. Lapinskas\*, M. Webster, D. Baker, J. E. Bruemmer, T. M. Hess, *Colorado State University, Fort Collins, CO, USA.*
- 114 **Detection of *Salmonella* in equine facility environmental samples by 2 methods.**  
A. N. Bradbery\*<sup>1</sup>, J. A. Coverdale<sup>1</sup>, L. M. Lucia<sup>2</sup>, G. R. Acuff<sup>2</sup>, C. J. Hartz<sup>1</sup>, <sup>1</sup>*Texas A&M University, College Station, TX, USA,* <sup>2</sup>*Texas A&M Center for Food Safety, College Station, TX, USA.*
- 115 **Turkey grit is a stable, mud-preventing footing for horse turnouts during wet seasons in the Pacific Northwest.**  
D. M. Sherwood\*, B. L. Camozzi, G. Bobe, *Oregon State University, Corvallis, OR, USA.*
- 116 **The influence of winter turnout design on horse physical fitness.**  
D. M. Sherwood\*, L. T. Comerford, G. Bobe, *Oregon State University, Corvallis, OR, USA.*
- 117 **Evaluating the relationship between wild stallion social behavior and reaction to sedation.**  
D. M. Sherwood\*, M. A. R. Udell, *Oregon State University, Corvallis, OR, USA.*
- 118 **Frequency of stress-related behaviors among therapy horses.**  
E. L. Berg\*, K. A. LaFond, *North Dakota State University, Fargo, ND, USA.*
- 119 **Use of a head elevation and nasopharyngeal flush model for short-term immune distress in horses.**  
J. M. Bobel\*, M. T. Long, L. K. Warren, *University of Florida, Gainesville, Florida, USA.*
- 120 **Influence of time of day of vaccination on immune response in mature Quarter Horse mares.**  
D. Seeloff, J. M. Reddish, K. Cole\*, *The Ohio State University, Columbus, OH, USA.*
- 110 **Influence of dietary yeast supplementation on immunoglobulin concentrations in response to vaccination in Quarter Horse mares.**  
K. Koke, J. M. Reddish, K. Cole\*, *The Ohio State University, Columbus, OH, USA.*

- 121 **Relationship between bodyweight, body condition score, seasonality, and purpose in equines.**  
J. Crespo, T. A. Hoagland, J. A. Nadeau\*, *University of Connecticut, Storrs, CT, USA.*
- 122 **Forage nutritive value, yield, and preference of legumes under horse grazing.**  
D. N. Catalano\*, C. C. Sheaffer, A. M. Grev, M. L. Schultz, K. L. Martinson, *University of Minnesota, St. Paul, MN, USA.*
- 123 **E Effect of sward height on grazing preference and pasture NSC concentration.**  
P. D. Siciliano\*, *North Carolina State University, Raleigh, NC, USA.*
- 124 **Determining water-soluble phosphorus in equine manure through sequential water extractions.**  
L. A. Skurupey\*, L. K. Warren, *University of Florida, Gainesville, FL, USA.*
- 125 **Long-term administration of dopamine antagonist alters prolactin and ACTH concentrations but has no effect on insulin sensitivity in geldings.**  
N. Arana-Valencia\*, D. L. Thompson, E. L. Oberhaus, *Louisiana State University Agricultural Center, Baton Rouge, LA, USA.*

## Teaching & Extension: Posters

Chair: **Mike Yoder**

Location: **Banyan Breezeway**

### ABSTRACT #

- 166 **Developing and operating an equine hay bank.**  
K. L. Martinson\*<sup>1</sup>, C. M. McKenzie<sup>2</sup>, B. C. Colombo<sup>3</sup>, S. L. Bettison<sup>4</sup>, <sup>1</sup>*University of Minnesota, St. Paul, MN, USA*, <sup>2</sup>*Sundown Horse Farm and Shelter, Hugo, MN, USA*, <sup>3</sup>*Hamline University School of Law, St. Paul, MN, USA*, <sup>4</sup>*Bettison Consulting LLC, Minnetonka, MN, USA.*
- 167 **Horse health perceptions and related costs in North Dakota.**  
M. A. Gunkelman\*, C. J. Hammer, *North Dakota State University, Fargo, ND, USA.*
- 168 **Evaluating the needs of extension agents in regards to Florida's adult equine program.**  
C. L. Wickens\*, S. M. Hew, *University of Florida, Gainesville, FL, USA.*
- 169 **Evaluating knowledge gained through quizzes in an online employer training program for horse industry professionals.**  
P. M. Auwerda\*<sup>1</sup>, C. Skelly<sup>2</sup>, G. Shelle<sup>2</sup>, K. Anderson<sup>3</sup>, K. Waite<sup>2</sup>, K. Martinson<sup>4</sup>, <sup>1</sup>*Iowa State University, Ames, IA, USA*, <sup>2</sup>*Michigan State University, East Lansing, MI, USA*, <sup>3</sup>*University of Nebraska, Lincoln, NE, USA*, <sup>4</sup>*University of Minnesota, St. Paul, MN, USA.*
- 170 **Novel approach to measuring and developing energy expenditure calculations for horseback riding.**  
C. L. O'Reilly\*, D. H. Sigler, J. D. Fluckey, M. M. Vogelsang, J. E. Sawyer, *Texas A&M University, College Station, TX, USA.*
- 171 **Supplementation trial exposes undergraduates to research.**  
J. K. Clark\*<sup>1,2</sup>, S. A. Wilson<sup>2</sup>, S. L. Tisdale<sup>2</sup>, K. K. Gossman<sup>2</sup>, T. S. Crook<sup>2</sup>, K. P. Coffey<sup>2</sup>, K. S. Jogan<sup>2</sup>, N. E. Jack<sup>2</sup>, B. C. Shanks<sup>1</sup>, <sup>1</sup>*Lincoln University, Jefferson City, MO, USA*, <sup>2</sup>*University of Arkansas, Fayetteville, AR, USA.*
- 172 **Sport horse handling skills gained through research participation in an equine exercise physiology course.**  
M. Nicodemus\*, L. Hodge, T. Bova, *Mississippi State University, Mississippi State, MS, USA.*
- 173 **Recruiting undergraduate equine volunteers.**  
K. S. Jogan\*<sup>1</sup>, M. K. Jogan<sup>2</sup>, <sup>1</sup>*University of Arkansas, Fayetteville, AR, USA*, <sup>2</sup>*Albright College, Reading, PA, USA.*
- 174 **Engaging students through scavenger hunt orientation.**  
K. S. Jogan\*<sup>1</sup>, M. K. Jogan<sup>2</sup>, <sup>1</sup>*University of Arkansas, Fayetteville, AR, USA*, <sup>2</sup>*Albright College, Reading, PA, USA.*
- 175 **Use of a semester-long assignment to influence student learning of equine body condition scoring.**  
J. K. Suagee\*, K. Bennet-Wimbush, *Agricultural Technical Institute, The Ohio State University, Wooster, OH, USA.*
- 176 **Use of protracted "think-pair-share" activity on American Horse Council Welfare Code of Practice.**  
S. L. Mastellar\*, H. K. Carroll, and R. C. Bott, *South Dakota State University, Brookings, SD, USA.*
- 177 **Incorporating experiential learning for equine-assisted activities and therapies with an in-house equine therapy program for veterans.**  
S. A. Newton-Cromwell\*<sup>1</sup>, B. D. McSpadden<sup>2</sup>, R. Johnson<sup>2</sup>, <sup>1</sup>*Middle Tennessee State University, Murfreesboro, TN, USA*, <sup>2</sup>*United States Department of Veterans Affairs, Murfreesboro, TN, USA.*



## **OTHER ACTIVITIES**

### **ESS General Business Meeting**

President: Jason Bruemmer

**5:00 – 6:00 PM**

Location: **Island Ballroom (Tarpon/Sawyer/Long Key)**

### **ESS Awards Banquet**

**6:30 PM – Cocktails/Cash Bar**

**7:00 PM – Dinner & Awards**

Location: **Garden Courtyard (outdoors)**